

REMARKS

The applicants are unable to understand the Office Action dated August 24, 2007, which appears to require a restriction between the species of Fig.1 and the species of Fig.7.

On June 28, 2006, the Examiner issued an Office Action requiring an election between the species of Fig.1 and species of Fig.7. A copy of the Office Action is enclosed herewith as exhibit A.

On August 28, 2006, the applicants filed a response to the restriction requirement, a copy at which is enclosed as Exhibit B. The response dated August 28, 2006 indicates that each of the Claims 1-25 is directed to species No. 1 illustrated in Claim 1, and that none of the Claims 1-25 is directed to species No.2 illustrated in Fig.7, and described on page 12, lines 11 and 12.

Moreover, the claims drawn to the circular shape (claims 5, 14 and 20) are each dependent and are respectively dependent upon claims 1, 12 and 16, respectively.

The claims drawn to the this type of filter, i.e., candle, dust, or cartridge (Claims 17, 28 and 19) are each dependant upon Claim 16.

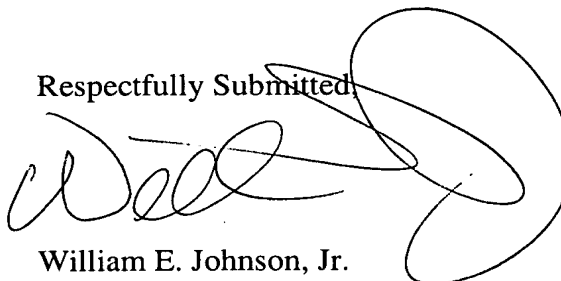
It is therefore respectfully traversed that there be a further restriction to Claims 1-25 (now Claims 1-3 and 5-25 since Claim 4 was earlier canceled).

This traversal notwithstanding, the applicants provisionally elect to prosecute Claims 1-3, 5, 7-14, 16, 17, 20 and 22-25. Claims 6 (non-circular), 15 (non-circular), 18 (dust), 19 (cartridge) and 21 (non-circular) are cancelled.

The applicants confirms that there have been no Information Disclosure Statements filed by the applicants. However, there has already been one action on the merits dated November 15, 2006, enclosed as Exhibit C, in which the Examiner cited forty-three (43) references; and to which a timely response was filed by the applicants on March 15, 2007, enclosed as Exhibit D.

Undersigned counsel for the applicants would welcome a telephone conference with the examiner should the examiner be of the opinion that such conference would advance the prosecution of this application.

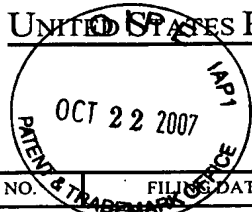
Respectfully Submitted,

A handwritten signature in black ink, appearing to read 'W. E. Johnson, Jr.', with a large, stylized circular flourish extending from the end of the signature.

William E. Johnson, Jr.
The Matthews Firm (Customer No. 021897)
Reg. No. 22,719
2000 Bering Drive, Suite 700
Houston, Texas 77057
(713) 355-4200 Telephone
(713) 355-9689 Facsimile



UNITED STATES PATENT AND TRADEMARK OFFICE



UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/777,311	02/12/2004	Michael C. Kilmer	CPE-001	5536

21897 7590 06/28/2006

THE MATTHEWS FIRM
2000 BERING DRIVE
SUITE 700
HOUSTON, TX 77057

EXAMINER

POPOVICS, ROBERT J

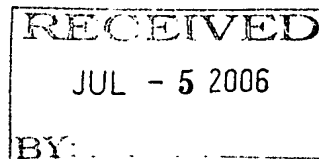
ART UNIT PAPER NUMBER

1724

DATE MAILED: 06/28/2006

mf
28 Aug 28 Sep 2006
Jnl

Please find below and/or attached an Office communication concerning this application or proceeding.



Office Action Summary



Application No.

10/777,311

Applicant(s)

KILMER ET AL.

Examiner

Robert J. Popovics

Art Unit

1724

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☐ Claim(s) ____ is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☒ Claim(s) 1-25 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Election/Restrictions

This application contains claims directed to the following patentably distinct species:

Species	Corresponding Drawing Figure
1	1
2	7

The species are independent or distinct because these species are mutually exclusive, and require different fields of search

Applicant is required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable. Currently, none of the claims appear to be generic.

Applicant is advised that a reply to this requirement must include an identification of the species that is elected consonant with this requirement, and a listing of all claims readable thereon, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which depend from or otherwise require all the limitations of an allowable generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

Applicant is advised that the reply to this requirement to be complete must include (i) an election of a species or invention to be examined even though the requirement be traversed (37 CFR 1.143) and (ii) identification of the claims encompassing the elected invention.

The election of an invention or species may be made with or without traverse. To reserve a right to petition, the election must be made with traverse. If the reply does not distinctly and specifically point out supposed errors in the restriction requirement, the election shall be treated as an election without traverse.

Should applicant traverse on the ground that the inventions or species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the inventions or species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C.103(a) of the other invention.

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Information Disclosure Statement

The listing of references in the specification is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other

information submitted for consideration by the Office, and MPEP § 609.04(a) states, "the list may not be incorporated into the specification but must be submitted in a separate paper." Therefore, unless the references have been cited by the examiner on form PTO-892, they have not been considered.

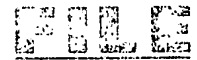
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert J. Popovics whose telephone number is (571) 272-1164. The examiner can normally be reached on Monday through Friday between 2:00 PM and 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Duane Smith can be reached on (571) 272-1166. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

A handwritten signature in black ink, appearing to read 'RJP', with a large, sweeping flourish extending from the end of the signature.

Robert James Popovics
Primary Examiner
Art Unit 1724



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

ART UNIT: 1724

~~~~~





## **CLAIMS**

1. (Original) A filter for use in a closed vessel, comprising;
  - a porous tube located within said closed vessel, said tube having a tubular wall, a first closed end and a second open end, and a filter media containment area within the interior of said porous tube between said first and second ends;
  - a first roll of unused filter media and a second take-up roll for taking up the filter media as it is spent in the process of operating said filter, said first and second rolls being located within the containment area of said porous tube, a length of said filter media being wrapped around the external surface or surfaces of said porous tube and being connected between said first roll and second roll such that when said take-up roll is rotated, the spent filter media is rolled up on the take-up roll.
2. (Original) The filter according to Claim 1 including, in addition thereto, a plurality of rollers mounted on or near the external surface or surfaces of said porous tube to reduce the friction between the external surface or surfaces of said porous tube and the filter media itself.
3. (Original) The filter according to Claim 2 including, in addition thereto, means for rotating said take-up roll as needed to thereby renew the filter media which wraps around the exterior surface or surfaces of said porous tube.

4. (Original) The filter according to Claim 3 including, in addition thereto, a passageway extending between said filter media containment area and the exterior of said porous tube to allow the media filter to pass between said first and second rolls and the exterior surface or surfaces of said porous tube.
5. (Original) The filter according to Claim 1 wherein said porous tube is circular in cross-section and has only a single external surface.
6. (Original) The filter according to Claim 1 wherein said porous tube is non-circular in cross-section and has a plurality of flat sides, each of said sides extending between the first and second ends of said porous tube.
7. (Original) The filter according to Claim 2, wherein at least one of said plurality of rollers extends between the first and second ends of said porous tube.
8. (Original) The filter according to Claim 2 wherein each of said plurality of rollers extends between the first and second ends of said porous tube.
9. (Original) The filter according to Claim 2 wherein said plurality of rollers are arranged in first and second spaced-apart sets, with a first set of said rollers being at or near the first end of said porous tube and the second set being at or near the second end of said porous tube.

10. (Original) The filter according to Claim 2 including, in addition thereto, a third set of rollers spaced intermediate said first and second sets of rollers.
11. (Original) The filter according to Claim 1, wherein said porous tube is comprised of ceramic.
12. (Original) A filter for use in a closed vessel, comprising:
- a porous tube located within said closed vessel, said tube having a tubular wall, a first closed end and a second open end, and a filter media containment area within the interior of said porous tube between said first and second ends;
  - a first roll of unused filter media and a second take-up roll for taking up the filter media as it is spent in the process of operating said filter, said first and second rolls being located within the containment area of said porous tube, a length of said filter media being wrapped around the external surface or surfaces of said porous tube and being connected between said first roll and second roll such that when said take-up roll is rotated, the spent filter media is rolled up on the take-up roll; and
  - means for rotating said take-up roll within said porous tube within said vessel while said vessel is closed.
13. (Original) The filter according to Claim 12 including, in addition thereto, a plurality of rollers mounted on or near the external surface or surfaces of said porous tube to reduce the friction between the external surface or surfaces of said porous tube and the filter media itself.

14. (Original) The filter according to Claim 13 wherein said porous tube is circular in cross-section and has only a single external surface.
15. (Original) The filter according to Claim 13 wherein said porous tube is non-circular in cross-section and has a plurality of flat sides, each of said sides extending between the first and second ends of said porous tube.
16. (Original) A method for renewing filter media used with a filter for removing solids from a fluid within a closed vessel;  
    placing a source roll of filter media and a filter media take-up roll within the interior of an elongated filter tube;  
    rolling the filter media from the source roll around the perimeter of the filter tube until the filter media can be threaded back into the filter media take-up roll; and  
    rotating said filter media take-up roll to renew the filter media around the perimeter of said filter tube without opening up the closed vessel within which the filter tube is located.
17. (Original) The method according to Claim 16 wherein said filter is a candle filter.
18. (Original) The method according to Claim 16 wherein said filter is a dust filter.
19. (Original) The method according to Claims 16 wherein said filter is a cartridge filter.
20. (Original) The method according to Claim 16 wherein said filter tube is circular in cross-section and has only a single external surface.

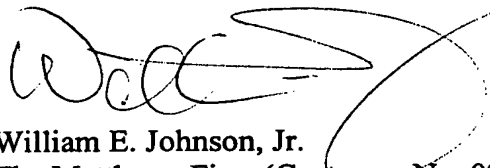
- 21.** (Original) The method according to Claim 16 wherein said filter tube is non-circular in cross-section and has a plurality of flat sides, each of said sides extending between the first and second ends of said porous tube.
- 22.** (Original) The method according to Claim 16 wherein at least one of said plurality of rollers extends between the first and second ends of said porous tube.
- 23.** (Original) The method according to Claim 16 wherein each of said plurality of rollers extends between the first and second ends of said porous tube.
- 24.** (Original) The method according to Claim 16 wherein said plurality of rollers are engaged in first and second spaced-apart sets, with a first set of said rollers being at or near the first end of said porous tube and the second set being at or near the second end of said porous tube.
- 25.** (Original) The method according to Claim 16 including, in addition thereto, a third set of rollers spaced intermediate said first and second sets of rollers.

### **REMARKS**

The applicant elects to prosecute Claims 1-25, which are each directed to the species No. 1 shown in FIG. 1. The Examiner's attention is respectfully directed to the fact that there are no claims presently pending in this case directed to FIG. 7. As set out in the specification commencing on page 12, line 11, FIG. 7 is directed to the use of a plurality of filters, and none of the claims is directed to this feature.

If the Examiner has any questions or would like to discuss this response, the undersigned counsel for the applicant would appreciate a telephone call at 713-355-4200.

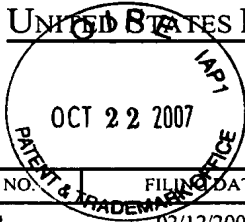
Respectfully Submitted,

A handwritten signature in black ink, appearing to read 'W. E. Johnson, Jr.', with a large, sweeping flourish extending to the right.

William E. Johnson, Jr.  
The Matthews Firm (Customer No. 021897)  
Reg. No. 22,719  
2000 Bering Drive, Suite 700  
Houston, Texas 77057  
(713) 355-4200 Telephone  
(713) 355-9689 Facsimile



UNITED STATES PATENT AND TRADEMARK OFFICE



UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/777,311      | 02/12/2004  | Michael C. Kilmer    | CPE-001             | 5536             |

21897 7590 11/15/2006

THE MATTHEWS FIRM  
2000 BERING DRIVE  
SUITE 700  
HOUSTON, TX 77057

EXAMINER

POPOVICS, ROBERT J

ART UNIT PAPER NUMBER

1724

DATE MAILED: 11/15/2006

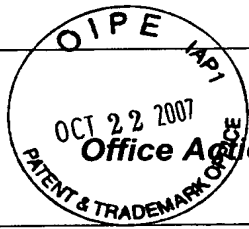
*MR*  
*15 Jan / 15 Feb 2007*

Please find below and/or attached an Office communication concerning this application or proceeding.

RECEIVED  
NOV 20 2006

BY: .....





Application No.

10/777,311

Applicant(s)

KILMER ET AL.

Examiner

Robert J. Popovics

Art Unit

1724

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 8/28/06.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

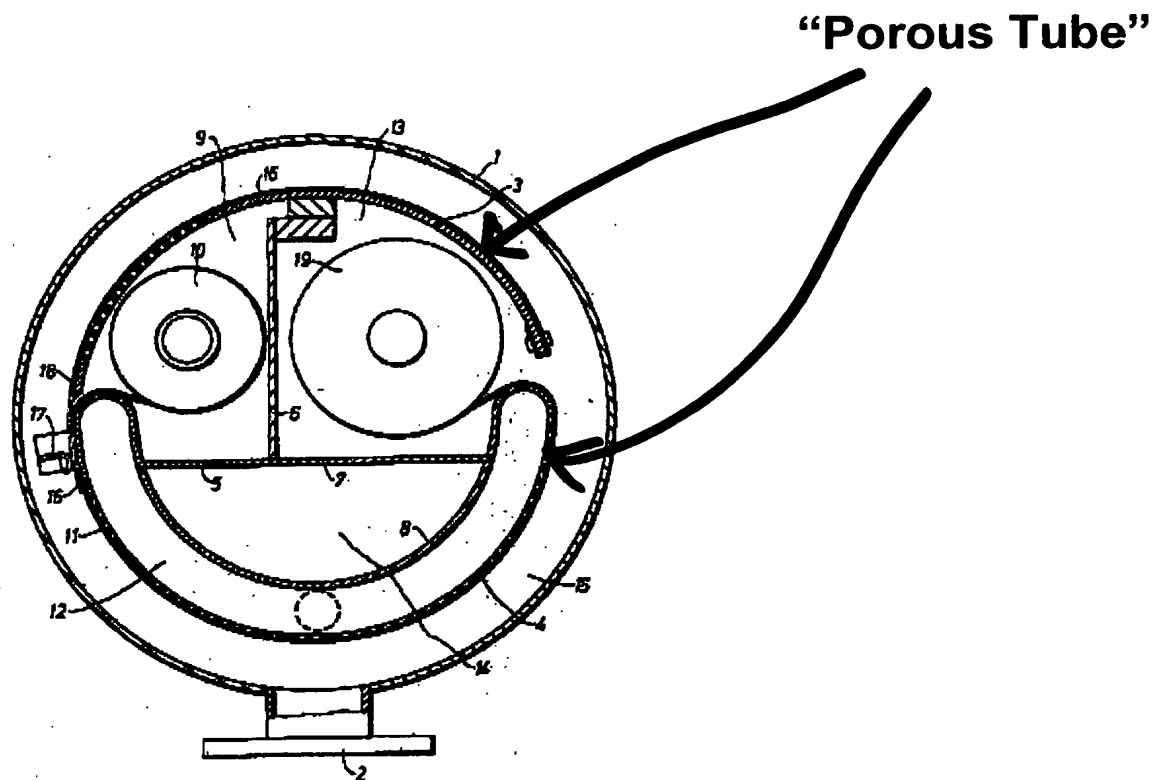
- |                                                                                                                        |                                                                                         |
|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                            | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____                                                |



**DETAILED ACTION**

***Claim Rejections - 35 USC § 102***

Claims 1,5,12 and 16-20 are rejected under 35 U.S.C. 102(b) as being anticipated by **Ruland (US 3,979,299)**. See rolls 10 and 19.



**FIG. 1**

***Claim Rejections - 35 USC § 103***

Claims 2-4,6-11,13-15 and 21-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Ruland (US 3,979,299)**.

The Examiner takes official notice that it is notoriously well known to employ rollers to support and/or facilitate movement (e.g., reduce friction) of filter media.

Claims **2-4,7-10,13-15** and **22-25** differ from **Ruland** by specifying rollers. It would have been obvious to employ conventional rollers in **Ruland** in order to support and/or facilitate movement of the filter media by reducing the friction associated with movement.

Claims **6** and **21** specify the porous tube to be non-circular in cross-section. The selection of the shape of the porous tube, absent a showing of criticality or unexpected results specifically associated therewith, is well within the purview of the skilled artisan, given the scope and content of the prior art. It would have been obvious for one skilled in the art to employ a non-circular porous tube in the system of **Ruland**, since a circular shape is simply one of many shapes that those skilled in the art would have recognized to be effective as the porous tube. See In re Dailey, 357 F.2d 669, 149 USPQ 47 (CCPA 1966) (The court held that the configuration of the claimed disposable plastic nursing container was a matter of choice which a person of ordinary skill in the art would have found obvious absent persuasive evidence that the particular configuration of the claimed container was significant.).

Claim **11** specifies the porous tube to be ceramic. Ceramic is a well known material of construction in the filtration art. The selection of the material of construction, absent a showing of criticality or unexpected results specifically associated therewith, is well within the purview of the skilled artisan, given the scope and content of the prior art. It would have been obvious for one skilled in the art to employ a ceramic porous tube in the system of **Ruland**, since ceramic is a well known and effective material of construction in the filtration art.

***Claim Rejections - 35 USC § 112***

Claims **22-25** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The reference to **"rollers"** in these claims appears to lack clear positive antecedent basis.

***Information Disclosure Statement***

The listing of references in the specification is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609.04(a) states, "the list may not be incorporated into the specification but must be submitted in a separate paper." Therefore, **unless the references have been cited by the examiner on form PTO-892, they have not been considered.**

Any inquiry concerning this communication should be directed to Robert J. Popovics at telephone number (571) 272-1164.

A large, stylized handwritten signature in black ink, appearing to read 'RJP', with a horizontal line underneath.

**Robert James Popovics  
Primary Examiner  
Art Unit 1724**



|                                   |                                       |                                                             |             |
|-----------------------------------|---------------------------------------|-------------------------------------------------------------|-------------|
| <b>Notice of References Cited</b> | Application/Control No.<br>10/777,311 | Applicant(s)/Patent Under<br>Reexamination<br>KILMER ET AL. |             |
|                                   | Examiner<br>Robert J. Popovics        | Art Unit<br>1724                                            | Page 1 of 4 |

**U.S. PATENT DOCUMENTS**

| * |   | Document Number<br>Country Code-Number-Kind Code | Date<br>MM-YYYY | Name                     | Classification |
|---|---|--------------------------------------------------|-----------------|--------------------------|----------------|
| * | A | US-82,735 A                                      | 10-1868         | Merrill                  | 210/386        |
| * | B | US-736,596 A                                     | 08-1903         | Grondahl                 | 210/386        |
| * | C | US-777,316 A                                     | 12-1904         | Tittel                   | 210/386        |
| * | D | US-794,173 A                                     | 07-1905         | Fullner                  | 210/386        |
| * | E | US-799,153 A                                     | 09-1905         | Fullner                  | 210/386        |
| * | F | US-1,669,718 A                                   | 05-1928         | MANNING FRED W           | 210/387        |
| * | G | US-1,695,811 A                                   | 12-1928         | MANNING FRED W           | 210/387        |
| * | H | US-2,119,978 A                                   | 06-1938         | HERMAN WOLTHUIS; et. al. | 55/354         |
| * | I | US-2,197,610 A                                   | 04-1940         | FEDELER JR JOHN H        | 210/748        |
| * | J | US-2,463,723 A                                   | 03-1949         | LOUIS SPRARAGEN          | 55/354         |
| * | K | US-3,743,100 A                                   | 07-1973         | Bahr, Albert             | 210/386        |
| * | L | US-4,935,138 A                                   | 06-1990         | Gaudfrin, Guy            | 210/386        |
| * | M | US-4,963,259 A                                   | 10-1990         | Barcomb et al.           | 210/386        |

**FOREIGN PATENT DOCUMENTS**

| * |   | Document Number<br>Country Code-Number-Kind Code | Date<br>MM-YYYY | Country | Name | Classification |
|---|---|--------------------------------------------------|-----------------|---------|------|----------------|
|   | N |                                                  |                 |         |      |                |
|   | O |                                                  |                 |         |      |                |
|   | P |                                                  |                 |         |      |                |
|   | Q |                                                  |                 |         |      |                |
|   | R |                                                  |                 |         |      |                |
|   | S |                                                  |                 |         |      |                |
|   | T |                                                  |                 |         |      |                |

**NON-PATENT DOCUMENTS**

| * |   | Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages) |
|---|---|-------------------------------------------------------------------------------------------|
|   | U |                                                                                           |
|   | V |                                                                                           |
|   | W |                                                                                           |
|   | X |                                                                                           |

\*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)  
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

|                                   |                                       |                                                             |             |
|-----------------------------------|---------------------------------------|-------------------------------------------------------------|-------------|
| <b>Notice of References Cited</b> | Application/Control No.<br>10/777,311 | Applicant(s)/Patent Under<br>Reexamination<br>KILMER ET AL. |             |
|                                   | Examiner<br>Robert J. Popovics        | Art Unit<br>1724                                            | Page 2 of 4 |

**U.S. PATENT DOCUMENTS**

| * |   | Document Number<br>Country Code-Number-Kind Code | Date<br>MM-YYYY | Name                  | Classification |
|---|---|--------------------------------------------------|-----------------|-----------------------|----------------|
| * | A | US-2,720,973 A                                   | 10-1955         | GROSS MAURICE J       | 210/223        |
| * | B | US-3,224,587 A                                   | 12-1965         | SCHMIDT JR HENRY      | 210/330        |
| * | C | US-3,375,932 A                                   | 04-1968         | EIICHI ISHIGAKI       | 210/390        |
| * | D | US-3,596,442 A                                   | 08-1971         | Neumann, Gerhard Max  | 55/354         |
| * | E | US-3,648,842 A                                   | 03-1972         | Zievers, James F.     | 210/237        |
| * | F | US-3,780,863 A                                   | 12-1973         | Light, Douglas J. N.  | 210/97         |
| * | G | US-3,901,809 A                                   | 08-1975         | Ball et al.           | 210/387        |
| * | H | US-3,979,299 A                                   | 09-1976         | Ruland, Dieter        | 210/387        |
| * | I | US-4,088,581 A                                   | 05-1978         | Carle, Jean-Claude A. | 210/391        |
| * | J | US-4,260,492 A                                   | 04-1981         | Ito et al.            | 210/386        |
| * | K | US-4,427,546 A                                   | 01-1984         | Choquenot et al.      | 210/351        |
| * | L | US-4,826,596 A                                   | 05-1989         | Hirs, Gene            | 210/387        |
| * | M | US-4,881,957 A                                   | 11-1989         | Shofner, Frederick M. | 95/23          |

**FOREIGN PATENT DOCUMENTS**

| * |   | Document Number<br>Country Code-Number-Kind Code | Date<br>MM-YYYY | Country | Name | Classification |
|---|---|--------------------------------------------------|-----------------|---------|------|----------------|
|   | N |                                                  |                 |         |      |                |
|   | O |                                                  |                 |         |      |                |
|   | P |                                                  |                 |         |      |                |
|   | Q |                                                  |                 |         |      |                |
|   | R |                                                  |                 |         |      |                |
|   | S |                                                  |                 |         |      |                |
|   | T |                                                  |                 |         |      |                |

**NON-PATENT DOCUMENTS**

| * |   | Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages) |
|---|---|-------------------------------------------------------------------------------------------|
|   | U |                                                                                           |
|   | V |                                                                                           |
|   | W |                                                                                           |
|   | X |                                                                                           |

\*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)  
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

|                                   |                                       |                                                             |             |
|-----------------------------------|---------------------------------------|-------------------------------------------------------------|-------------|
| <b>Notice of References Cited</b> | Application/Control No.<br>10/777,311 | Applicant(s)/Patent Under<br>Reexamination<br>KILMER ET AL. |             |
|                                   | Examiner<br>Robert J. Popovics        | Art Unit<br>1724                                            | Page 3 of 4 |

#### U.S. PATENT DOCUMENTS

| * |   | Document Number<br>Country Code-Number-Kind Code | Date<br>MM-YYYY | Name              | Classification |
|---|---|--------------------------------------------------|-----------------|-------------------|----------------|
| * | A | US-2,055,874 A                                   | 09-1936         | MANNING FRED W    | 210/107        |
| * | B | US-2,720,974 A                                   | 10-1955         | FOWLER LESLIE L   | 210/223        |
| * | C | US-2,823,806 A                                   | 02-1958         | HARLAN AVERY S    | 210/387        |
| * | D | US-3,040,495 A                                   | 06-1962         | JACOB DOEBELI     | 95/277         |
| * | E | US-3,745,748 A                                   | 07-1973         | Goldfield et al.  | 95/273         |
| * | F | US-4,686,042 A                                   | 08-1987         | Eckardt, Fred H.  | 210/386        |
| * | G | US-4,740,305 A                                   | 04-1988         | Miller, Ray R.    | 210/783        |
| * | H | US-4,919,825 A                                   | 04-1990         | Crocket, Frank M. | 210/783        |
| * | I | US-4,973,407 A                                   | 11-1990         | Wagner, Jurgen    | 210/387        |
| * | J | US-5,143,602 A                                   | 09-1992         | Piepho, Ralf F.   | 210/97         |
| * | K | US-2004/0168959 A1                               | 09-2004         | Cousineau et al.  | 210/097        |
| * | L | US-2005/0178734 A1                               | 08-2005         | Kilmer et al.     | 210/791        |
| * | M | US-6,951,606 B2                                  | 10-2005         | Cousineau et al.  | 210/104        |

#### FOREIGN PATENT DOCUMENTS

| * |   | Document Number<br>Country Code-Number-Kind Code | Date<br>MM-YYYY | Country | Name | Classification |
|---|---|--------------------------------------------------|-----------------|---------|------|----------------|
|   | N |                                                  |                 |         |      |                |
|   | O |                                                  |                 |         |      |                |
|   | P |                                                  |                 |         |      |                |
|   | Q |                                                  |                 |         |      |                |
|   | R |                                                  |                 |         |      |                |
|   | S |                                                  |                 |         |      |                |
|   | T |                                                  |                 |         |      |                |

#### NON-PATENT DOCUMENTS

| * |   | Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages) |
|---|---|-------------------------------------------------------------------------------------------|
|   | U |                                                                                           |
|   | V |                                                                                           |
|   | W |                                                                                           |
|   | X |                                                                                           |

\*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)  
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

**Notice of References Cited**

Application/Control No.

10/777,311

Applicant(s)/Patent Under  
Reexamination  
KILMER ET AL.

Examiner

Robert J. Popovics

Art Unit

1724

Page 4 of 4

**U.S. PATENT DOCUMENTS**

| * |   | Document Number<br>Country Code-Number-Kind Code | Date<br>MM-YYYY | Name                  | Classification |
|---|---|--------------------------------------------------|-----------------|-----------------------|----------------|
| * | A | US-4,182,680 A                                   | 01-1980         | Carle, Jean-Claude A. | 210/386        |
| * | B | US-4,861,495 A                                   | 08-1989         | Pietzsch, Kurt E.     | 210/739        |
| * | C | US-5,683,581 A                                   | 11-1997         | Schimion et al.       | 210/386        |
| * | D | US-6,736,965 B2                                  | 05-2004         | Cousineau et al.      | 210/104        |
|   | E | US-                                              |                 |                       |                |
|   | F | US-                                              |                 |                       |                |
|   | G | US-                                              |                 |                       |                |
|   | H | US-                                              |                 |                       |                |
|   | I | US-                                              |                 |                       |                |
|   | J | US-                                              |                 |                       |                |
|   | K | US-                                              |                 |                       |                |
|   | L | US-                                              |                 |                       |                |
|   | M | US-                                              |                 |                       |                |

**FOREIGN PATENT DOCUMENTS**

| * |   | Document Number<br>Country Code-Number-Kind Code | Date<br>MM-YYYY | Country | Name | Classification |
|---|---|--------------------------------------------------|-----------------|---------|------|----------------|
|   | N |                                                  |                 |         |      |                |
|   | O |                                                  |                 |         |      |                |
|   | P |                                                  |                 |         |      |                |
|   | Q |                                                  |                 |         |      |                |
|   | R |                                                  |                 |         |      |                |
|   | S |                                                  |                 |         |      |                |
|   | T |                                                  |                 |         |      |                |

**NON-PATENT DOCUMENTS**

| * |   | Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages) |
|---|---|-------------------------------------------------------------------------------------------|
|   | U |                                                                                           |
|   | V |                                                                                           |
|   | W |                                                                                           |
|   | X |                                                                                           |

\*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)  
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.



ATTORNEY DOCKET No.: CPE-001

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

IN RE APPLICATION OF:

MICHAEL C. KILMER &amp; DOYLE J. GOULD

EXAMINER:

ROBERT J. POPOVICS

SERIAL No.: 10/777,311

FILED: 12 FEBRUARY 2004

ART UNIT: 1724

For: *NEW & IMPROVED FILTER FOR  
USE IN CLOSED VESSELS ALLOWING  
THE USE OF FILTER MEDIA WHICH  
CAN BE RENEWED WITHOUT  
OPENING THE VESSEL, AND METHOD  
OF USING SAME*

**AMENDMENT**

Dear Sir:

Responsive to the Office Action dated November 15, 2006, please cancel Claim 4,  
and amend the above-identified application as indicated in the enclosed Status of Claims.





## **STATUS OF CLAIMS**

1. (Currently Amended) A filter for use in a closed vessel, comprising;

a porous tube located within said closed vessel, said tube having a tubular wall, a first closed end and a second open end, and a filter media containment area within the interior of said porous tube between said first and second ends;

a first roll of unused filter media and a second take-up roll for taking up the filter media as it is spent in the process of operating said filter, said first and second rolls being located within the containment area of said porous tube, a length of said filter media being wrapped around the external surface or surfaces of said porous tube and being connected between said first roll and second roll such that when said take-up roll is rotated, the spent filter media is rolled up on the take-up roll, said tubular wall being continuous except for a single passageway in said tubular wall through which the filter media may pass to be moved along the external surface of said porous tube, and through which the filter media may return to the interior of said porous tube to be rolled onto said take-up roll.

2. (Original) The filter according to Claim 1 including, in addition thereto, a plurality of rollers mounted on or near the external surface or surfaces of said porous tube to reduce the friction between the external surface or surfaces of said porous tube and the filter media itself.
3. (Original) The filter according to Claim 2 including, in addition thereto, means for rotating said take-up roll as needed to thereby renew the filter media which wraps around the exterior surface or surfaces of said porous tube.

4. (Cancelled)
5. (Original) The filter according to Claim 1 wherein said porous tube is circular in cross-section and has only a single external surface.
6. (Original) The filter according to Claim 1 wherein said porous tube is non-circular in cross-section and has a plurality of flat sides, each of said sides extending between the first and second ends of said porous tube.
7. (Original) The filter according to Claim 2, wherein at least one of said plurality of rollers extends between the first and second ends of said porous tube.
8. (Original) The filter according to Claim 2 wherein each of said plurality of rollers extends between the first and second ends of said porous tube.
9. (Original) The filter according to Claim 2 wherein said plurality of rollers are arranged in first and second spaced-apart sets, with a first set of said rollers being at or near the first end of said porous tube and the second set being at or near the second end of said porous tube.
10. (Original) The filter according to Claim 2 including, in addition thereto, a third set of rollers spaced intermediate said first and second sets of rollers.
11. (Original) The filter according to Claim 1, wherein said porous tube is comprised of ceramic.

12. (Currently Amended) A filter for use in a closed vessel, comprising:

a porous tube located within said closed vessel, said tube having a tubular wall, a first closed end and a second open end, and a filter media containment area within the interior of said porous tube between said first and second ends;

a first roll of unused filter media and a second take-up roll for taking up the filter media as it is spent in the process of operating said filter, said first and second rolls being located within the containment area of said porous tube, a length of said filter media being wrapped around the external surface or surfaces of said porous tube and being connected between said first roll and second roll such that when said take-up roll is rotated, the spent filter media is rolled up on the take-up roll, said tubular wall being continuous except for a single passageway in said tubular wall through which the filter media may pass to be moved along the external surface of said porous tube, and through which the filter media may return to the interior of said porous tube to be rolled onto said take-up roll; and

means for rotating said take-up roll within said porous tube within said vessel while said vessel is closed.

13. (Original) The filter according to Claim 12 including, in addition thereto, a plurality of rollers mounted on or near the external surface or surfaces of said porous tube to reduce the friction between the external surface or surfaces of said porous tube and the filter media itself.

14. (Original) The filter according to Claim 13 wherein said porous tube is circular in cross-section and has only a single external surface.

- 15.** (Original) The filter according to Claim 13 wherein said porous tube is non-circular in cross-section and has a plurality of flat sides, each of said sides extending between the first and second ends of said porous tube.
- 16.** (Original) A method for renewing filter media used with a filter for removing solids from a fluid within a closed vessel;
- placing a source roll of filter media and a filter media take-up roll within the interior of an elongated filter tube;
- rolling the filter media from the source roll around the perimeter of the filter tube until the filter media can be threaded back into the filter media take-up roll; and
- rotating said filter media take-up roll to renew the filter media around the perimeter of said filter tube without opening up the closed vessel within which the filter tube is located.
- 17.** (Original) The method according to Claim 16 wherein said filter is a candle filter.
- 18.** (Original) The method according to Claim 16 wherein said filter is a dust filter.
- 19.** (Original) The method according to Claims 16 wherein said filter is a cartridge filter.
- 20.** (Original) The method according to Claim 16 wherein said filter tube is circular in cross-section and has only a single external surface.
- 21.** (Original) The method according to Claim 16 wherein said filter tube is non-circular in cross-section and has a plurality of flat sides, each of said sides extending between

the first and second ends of said porous tube.

22. (Original) The method according to Claim 16 wherein at least one of said plurality of rollers extends between the first and second ends of said porous tube.
23. (Original) The method according to Claim 16 wherein each of said plurality of rollers extends between the first and second ends of said porous tube.
24. (Original) The method according to Claim 16 wherein said plurality of rollers are engaged in first and second spaced-apart sets, with a first set of said rollers being at or near the first end of said porous tube and the second set being at or near the second end of said porous tube.
25. (Original) The method according to Claim 16 including, in addition thereto, a third set of rollers spaced intermediate said first and second sets of rollers.

## REMARKS

Claim 4 has been cancelled without prejudice or disclaimer since it has been essentially incorporated into Claims 1 and 12.

Reconsideration is respectfully requested for Claims 1-3 and 5-25, said claims having been rejected under 35 USC 102 and under 35 USC 103, each based upon US Patent No. 3979299 to Ruland (the '299 patent).

Addressing first the rejection of claim 16 because it is the only claim not currently amended in this application. The Ruland patent does show a source of filter medium 10 and a take-up roll 19, which is undoubtedly intended that the take-up roll 19 would rotate to cause the filter medium to leave the source roll 10 and to be rolled up onto the take-up roll 19. However, the '299 patent is totally silent as to what causes the take-up roll 19 to be rotated. In column 1, lines 27-31 there is the statement that "the filter cloth is transported continuously or intermittently over a supporting sieve to a receiving chamber". Further in column 1, at lines 43-51 indicate that the magazine chamber contains a rotatably mounted magazine roll from which the filter cloth is unwound and the filter material is put onto a rotatably mounted winding roll in the receiving chamber. In column 2, there is an indication that the magazine chamber 9 contains a magazine roll 10 from which a filter cloth lever is removed as required. Finally, in column 2 there is an indication that the used filter cloth 11 is rolled up onto take-up means in the form of roll 19. Again, this is the only disclosure in the entire '299 patent of the take-up roll 19 or the supply roll 10 being rotated.

Independent claim 16, however, has a method step of "rotating said filter media take-up roll to renew the filter media around the perimeter of said filter tube without opening up the closed vessel within which the filter tube is located". This is accomplished, for example, with respect to FIG. 6, the operation of which is described on page 11 of the applicant's specification beginning at line 7. This particular method step which causes the filter media

take-up roll to rotate without opening up the closed vessel is quite clearly neither disclosed, taught, or even suggested in the Ruland '299 patent.

Claims 1 and 12, the only other independent claims presently existing in the application, have each been amended to call for the porous tubular wall to be continuous except for a single passageway through which the filter media may exit and return to the take-up roll. This is a marked departure from the Ruland '299 patent which has 2 passageways, a first passageway 18 for the filter media as it leaves the supply roll 10 and an unnumbered passageway allowing the filter media to return to the take-up roll 19.

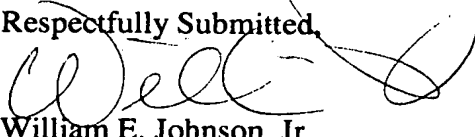
There are several advantages to having just a single passageway, as contrasted to having the two passageways as shown in the '299 patent, not the least of which is the mechanical stability. The jacket 3 in the '299 patent, is removable and when it is in place the jacket 3 provides no mechanical stability. In column 2, line 51, it is seen that the jacket 3 is removable and while the apparatus is in operation it is covered by a cloth 16.

The present invention provides more mechanical stability and a much improved filtering process over that shown in the '299 patent.

Each of the claims presently outstanding, other than for the method claim 16, now calls for the porous tube to be continuous other than for the single passageway which allows the filter media to exit and return through the same passageway.

Claims 1-3 and 5-25 are believed to be patentably distinct over the cited '299 patent, both under 35 USC 102 and 35 USC 103. A favorable consideration of these claims is respectfully requested.

Respectfully Submitted,



William E. Johnson, Jr.

The Matthews Firm (Customer No. 021897)

Reg. No. 22,719

2000 Bering Drive, Suite 700

Houston, Texas 77057

(713) 355-4200 Telephone

(713) 355-9689 Facsimile